



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

ART. X. — CRITICAL NOTICES.

1. — *Elements of Chemistry, including the recent Discoveries and Doctrines of the Science*. By the late EDWARD TURNER, M. D. Sixth American Edition. With Notes and Emendations, by FRANKLIN BACHE, M. D. Philadelphia : Thomas, Cowperthwaite, & Co. 8vo. pp. 666. 1840.

THIS excellent work is well known. It has passed through five editions in England, where a sixth was in the course of publication, at the time of the accomplished author's death. The publication was continued by Dr. Turner's brother, in conjunction with Professor Liebig. In consequence of the demand for the work, four hundred and ten pages of the new edition were issued in London, as a "First Part," in 1837. Several months elapsed before the "Second Part" appeared, and still a longer interval before the publication of the "Third Part." This last comprises but about one hundred pages, and was issued in 1839. Since then no more has appeared, and the work is still incomplete.

Five editions have been published in this country, under the editorial care of Professor Bache, than whom a more competent editor could not have been selected. We have, however, in common with others, regretted, that Professor Bache did not render Dr. Turner's work of a more practical and experimental character. It is not sufficiently elementary for beginners, or for use as a text-book, although admirably suited to the wants of the more advanced student of chemistry.

Two years ago, four hundred and sixty pages of a new American edition were issued, embracing the First Part ; and we have been impatiently looking for the remaining parts. The whole is now before us, as "the Sixth American Edition" ; but it is not announced as from the sixth London edition, — an important fact, as will be seen on comparing the two. Indeed, this "Sixth American Edition" is, with some few changes in but 283 of the pages, only a reprint of the old edition of 1835. The Sixth English edition presents us, in almost every page, with great and important changes and alterations of the text ; not so the Sixth American.

It is true, that the advertisement, prefixed to this edition, informs us, that it is a reprint of the fifth, as far as "Sulphur, page 191," when the printing appears to have been suspended

until the receipt of the First and Second Parts of the new English edition, from which we are told in the "Advertisement," "the printing was continued." This is indeed a candid avowal that this sixth American edition is neither Dr. Turner's "Elements" as it *was*, nor as it *is*; and, on comparison, the English edition will be found to be quite a different book.

What is naturally to be inferred, under these circumstances, is, that the publishers chose to finish their undertaking, and get the book into the market at any rate, rather than wait for the completion of the work in London; and that, Dr. Bache's name having been connected with the other editions, and he having revised the first four hundred and sixty pages, the publishers completed the six hundred and sixty-six pages, by reprinting the residue from the old edition, on their own responsibility, and without sufficient regard to the reputation of the deceased author, or to the reasonable expectations of the living.

We might adduce page after page, from this sixth American edition, with the corresponding passages from the parts of the sixth English, to show how many and important are the omissions in the former, and the changes made in the latter; but we have room to notice only a few of them.

The elegant method of estimating the specific heat of gases, founded on La Place's formula for calculating the velocity of sound, is given at page 52, in the sixth English edition, but is altogether wanting in the sixth American. In the table of the relations of the specific heats of elementary bodies and their equivalents, the four important substances, arsenic, carbon, iodine, and phosphorus, are omitted. The American edition contains no notice of the researches of Avogadro and Newmann, which are found in the English, at page 55. These and several other additions to the English edition are, it is true, comprised in the earlier pages which were not received in this country when the First Part of the American edition appeared, but there can be no excuse for not having given them in the Appendix.

At pages 84-86 of the sixth English edition, Dr. Turner has given a succinct and masterly account of the undulatory theory of light, which alone, in his opinion, is suitable to the present condition of the science. In the sixth American edition it is merely named. We have, too, the old statement, that light is "not reflected by purely gaseous bodies," instead of "light may be reflected by all media, whether solid, liquid, or *gaseous*!" The table of the refractive indices of gases, contained in the sixth English edition, is

not to be found in the American. There are important changes in the English edition, in the pages devoted to "Light," which the reader will in vain seek in the American.

Passing over the alterations which, in the English edition, have been made in the first part of the section on Electricity, and do not appear in the American edition, we turn to page 117 of the former, where we find a notice of the valuable and interesting experiments of Mossotti on the forces which regulate the internal constitution of bodies, and which are to be viewed as favorable to the Franklinian hypothesis. Of these nothing is said in the sixth American edition, "including the recent discoveries and doctrines."

Every one at all conversant with the great accession to our knowledge of the laws of the action of Voltaic circles, which has been made by the researches of Faraday, will be astonished to find, that this American edition contains merely the statements of 1835. It need hardly be remarked, that such is far from being the case with the sixth London edition. In the latter, too, the whole arrangement of the section has been changed and greatly improved. In this American edition, the slight allusion to Becquerel's experiments remains; but the notices of those of Crosse, and of those of Fox on the electrical state of mineral veins, and the new light they have thrown upon many obscure phenomena, which occur in the English edition, should have had a place in the Appendix, where, however, they are not to be found.

There are also several new explanatory figures wanting in the American edition.

In the English edition we find an account of Ampère's views in connexion with the Atomic theory, and some important additions in relation to the theory of volumes, which are wanting in the American edition.

Dr. Turner has exhibited the changes which Berzelius has made in chemical formulæ; but the student who may be referred to the sixth American edition of the "Elements," that he may be enabled to use or understand them, will be sadly disappointed. He will find no notice of the formulæ of Liebig and Poggendorff, which are coming so much into use in Europe, and which are, indeed, constantly employed in the body of the English edition of Turner's work.

The latter part of the "Elements" relates to a department of the science, in which greater changes have been called for than in any other; from the extent to which the analysis of organized bodies has recently been carried, the

skill with which it has been executed, and the inferences to which it has led. Indeed, so vast had been the accumulation of facts in 1837, that it became absolutely necessary to remodel and rewrite all the pages on "Organic Chemistry," and this within *two* years after the publication of the fifth edition in England. Not a page, period, or line, we believe, remains in the sixth English edition as it was in the fifth. It is here an entirely different work. And yet a sixth American edition is thrust upon us in 1840, professing to contain "the recent discoveries and doctrines"! Nor, as has been said, is this part even yet completed in England. In the English edition seven distinct compounds are arranged under carbonic oxide (and this in the "Organic Chemistry"), while in the American that substance retains the same place it did in the edition of 1835, and the compounds are dispersed through other parts of the volume, anywhere but where they belong. So, too, oxalic acid is to be found in its old place, among the "Vegetable Acids."

The new views of Liebig are very fully given in the English edition (contained in the "third" part, published in England months ago); but we find nothing of them in the one before us. As to the compounds of carbon and nitrogen, and cyanogen as the compound radical, we are left in utter darkness. Liebig describes, in his continuation of Dr. Turner's "Elements," six compounds. Of one of these with hydrogen, viz. Hydrocyanic (Prussic) acid, — so important to be known, even to those who are not professed chemists, — there is nothing in this sixth American edition. Neither the process for making it, nor its properties, nor the means of detecting it after death, in cases of suspected poisoning, are given. One would not learn from this book any thing more than the existence of this interesting though deadly acid, to which, in the sixth English edition, several pages are devoted. At page 260 of the American edition we read, that "it [cyanogen] is in fact a compound radical of organic chemistry, and therefore its various combinations will be described in that part of the work." But no description is to be found!

Sufficient has been said to prove to our readers, that the sixth American edition of Turner's "Elements of Chemistry" is not what the title-page gives it out to be; that it does not contain the recent discoveries and doctrines; and that it is in fact a long way, — years, we had almost said, — behind the present state of the science. We are far from

attributing this to any oversight of the learned editor. We are persuaded, that, had the work been published at once, as commenced, it would have fully sustained the high character it had acquired and have been brought up to the state of the science. But we cannot but think, that the editor, finding so great delay in bringing out the work, abandoned the task, and is not responsible for its completion from the old edition. All the preceding editions have been kept up to the state of the science ; the present must not only materially impair the usefulness of the work wherever it obtains currency, but must be viewed by every follower of science, and by every friend of the late and lamented author, as an act of injustice to his reputation and memory. It would be no more than right for the publishers to call in the copies that have been issued, and replace them by others more correct, when the sixth edition shall have been *completed* in England.

2. — *Eighth Annual Report of the Trustees of the Perkins Institution and Massachusetts Asylum for the Blind, to the Corporation.* Boston : John H. Eastburn. 1840. 8vo. pp. 32.

HERE we have another interesting Report on the condition of the Massachusetts Institution for the Blind ; a foundation, which reflects the highest credit on the community, for the liberal spirit which produced and has maintained it, and which is equally honorable to the managers of it, for the enlightened system of instruction pursued there. It is now but ten years since the first germ of this establishment was to be found, in a private dwelling, in an obscure corner of Boston, struggling under all the embarrassments of want of funds, and the inexperience consequent on a new undertaking, of which there was but very little knowledge in the country. The experiment began with a few pupils well selected, to show the capacity of the blind, under a proper tuition, for entering on the most useful branches of knowledge. When the trial had been fairly made, and its success established to the satisfaction of the few gentlemen, who had charge of the infant institution, the results were submitted to the public. The pupils, the scheme of education, and its peculiar apparatus, were brought before the legislature, and before large assemblies in the city. A wide and deep interest was excited in behalf of this less favored portion of our